


STD/HIV Update: The Ins and Outs of Screening and Prevention

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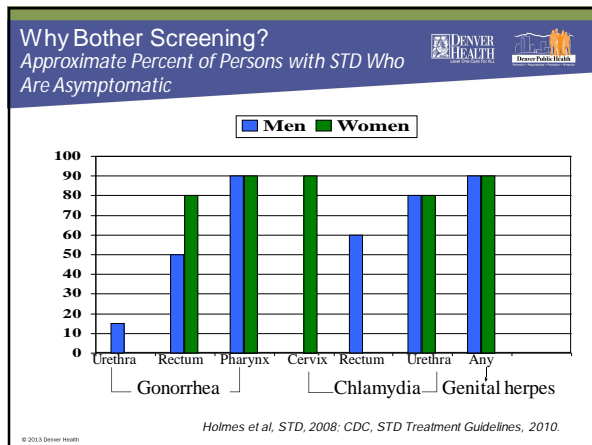


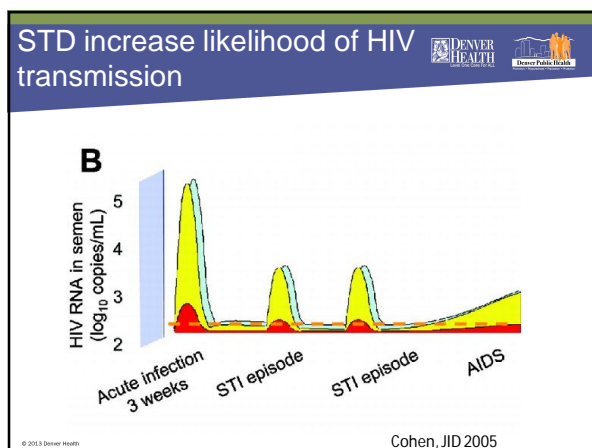
Objectives

- Articulate who is at greatest risk for chlamydia, gonorrhea, and HIV
- Implement the correct screening test in the correct anatomic site
- Effectively treat common uncomplicated STDs
- Describe HIV PEP and PrEP
- Identify local and national resources for clinical consultation on STDs

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2010 STD Guidelines


- Authoritative source for STD management
- Diagnostic evaluation, treatment regimens, prevention, and vaccination strategies
- Order hard copies www.cdc.gov/std
- Available as app
- Wall charts, pocket guides



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2014 STD Guidelines

- Due any day nowbut delayed into early 2015 by Ebola efforts.
- (Ebola can be spread sexually, FYI.)



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Josh

21 year old male with 2 week history of tingling with urination


Partners: 4 in past year, all women; total lifetime 8

Prevention of pregnancy: condoms but not consistent

Protection from STIs: condoms usually

Practices: vaginal and oral

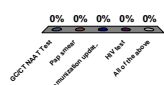
Past history of STI's: Never been tested before



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What type of preventive service should we offer today?

A. GC/CT NAAT Test
B. Immunization update: HPV and Hep B
C. HIV test
D. Syphilis screening
E. All of the above



0% 0% 0% 0% 0%

GC/CT NAAT Test Pop-based Immunization update HIV test Syphilis screening All of the above

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STD Screening in Men:
CDC STD Treatment Guidelines

- HIV: at least once, annually if ongoing risk
- Gonorrhea and Chlamydia:
 - If high risk setting such as corrections
 - All appropriate anatomic settings

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STD Screening for Women

Sexually active adolescents and young adults < 25
 Routine chlamydia and gonorrhea screening
 Others STDs and HIV based on risk



Women 25 years of age and over
 STD/HIV testing based on risk
 Corrections

Pregnant women
 Chlamydia
 Gonorrhea (< 25 years of age or risk)
 HIV
 Syphilis serology
 Hep B surface antigen
 Hep C (if high risk)


CDC 2010 STD Tx Guidelines www.cdc.gov/std/treatment

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Josh






- Results: HIV rapid test negative, syphilis negative
- Results next day: GC negative, CT positive
- Call patient, treat him with Azithromycin 1 gm
- “I am so glad you came in and we found out you have chlamydia. We can treat that. Let’s discuss how to avoid it in the future. ”



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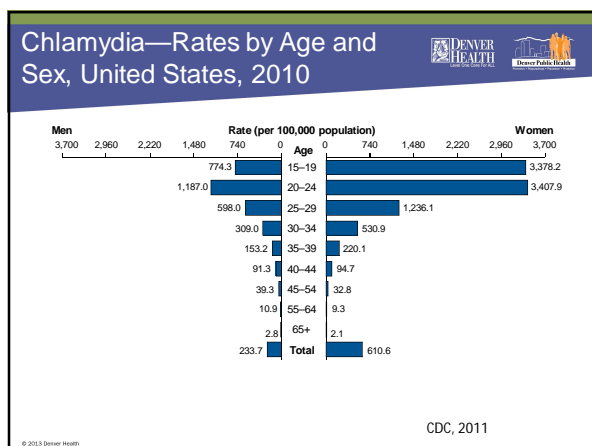
Urethritis

- Gonorrhea: 5-20%
- Nongonococcal urethritis (NGU)
 - *Chlamydia*: 15-40%
 - *Mycoplasma genitalium*: 5-25%
 - *Ureaplasma*: 0-20%; data inconsistent, biovars differ
 - *Trichomonas vaginalis*: 5-20% (age, geography)
 - HSV: 15-30%; urethritis in primary infection
 - Adenovirus, enterics, Candida, anaerobes

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Risk Factors



CT

- New/Multiple sex partners
- Adolescents
- OCP users
- Pregnant women

GC

- New/Multiple sex partners
- Adolescents

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Clinical Characteristics of Gonococcal and Non-Gonococcal Urethritis



	GC	NGU
Incubation period	2-8 days	7-14 days
Onset	sudden	Gradual
Symptoms	++ dysuria ++ discharge	+/- dysuria +/- discharge
Discharge color	74% purulent 22% white 4% clear	11% purulent 56% white 33% clear
Etiology	GC	CT (40%) M. genitalium, U. urealyticum, HSV, trichomonas (more likely if >40)

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Mucopurulent Cervicitis



- No validated diagnostic criteria
- Diagnosis made by seeing:
 - Yellow endocervical discharge
 - Cervical friability
- Causes: in one large series,
 - CT – 21%,
 - GC – 14%,
 - both – 12%,
 - Trichomonas – 9%,
 - HSV – 6%;
 - no identified infection – 38%

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Diagnostic Criteria for Urethritis



- Mucopurulent or purulent discharge on examination
- Grams stain of urethral secretions demonstrating ≥ 2 WBCs per oil immersion field
- Positive leucocyte esterase test on first-voided urine
- Microscopic examination of first-voided urine sediment demonstrating ≥ 10 WBCs/OIF

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Chlamydia and gonorrhea NAAT Testing



- Most sensitive test
 - Urine is adequate
 - Urethral or cervical swab also fine, but not necessary

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Chlamydia trachomatis Treatment



Azithromycin 1 gm po as a single dose
or
Doxycycline 100 mg po bid x 7d

- No convincing change in MICs to tetracyclines, macrolides over past 25 years, in contrast to GC
- Treatment failure is most likely due to non-compliance or re-infection
- Test-of-cure not advised routinely (consider: pregnancy, atypical tx)
- **Rescreen 12 to 16 weeks after infection** due to high rates of re-infection

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www.cdc.gov : 2010 STD treatment guidelines

Persistent NGU: Trichomonas



- Up to 20% of NGU in men could be due to Trichomonas
- Wet prep inadequate; Need NAAT
- If adequate treatment and no re-exposure, add metronidazole (2 grams x 1) to re-treatment regimen

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Schwebke, JID, 2003

M. genitalium



- Causes 15-20% of NGU cases and 30% of persistent/recurrent urethritis
- Pathogenic role in women is less clear:
 - Can be detected in 10%-30% of women with cervicitis
 - Appears to be more common in women with than women without cervicitis
 - May play a role in PID and infertility
 - Very little data on ectopic pregnancy

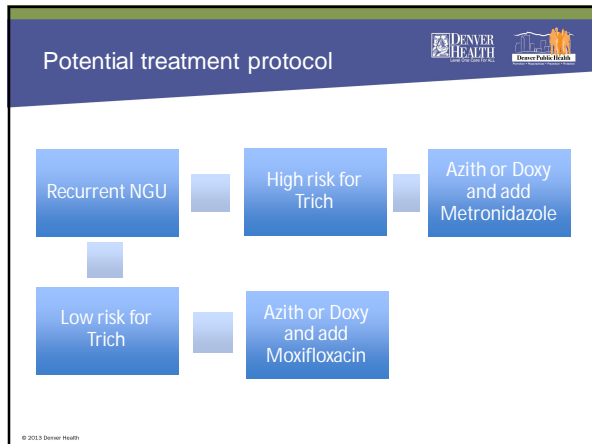
Source:
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M. genitalium - Treatment



- 7-day doxycycline treatment is largely ineffective
- Azithromycin is more effective but resistance appears to be rapidly emerging (>50% in some settings)
- Moxifloxacin (400 mg x 7, 10 or 14 days) has been successfully used and may be indicated in patients who fail standard treatment for NGU or PID

Source:
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Chlamydia and NGU

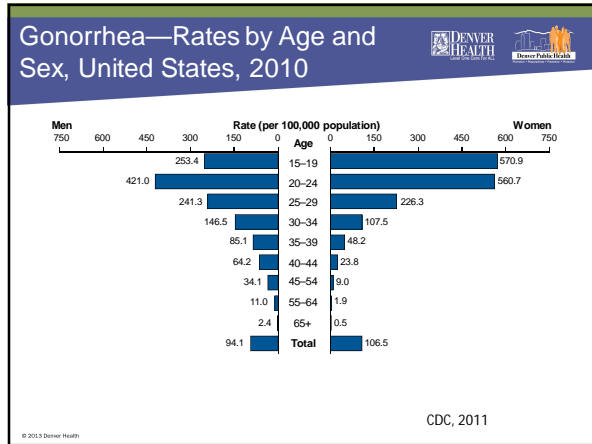
- Screen for asymptomatic disease
- Treat CT with Azith or Doxy
- Recurrent NGU consider trich or Mycoplasma
 - I.e. Consider adding Flagyl or Moxifloxacin

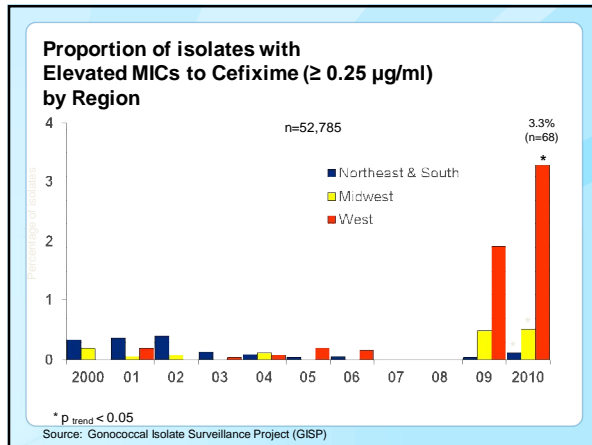
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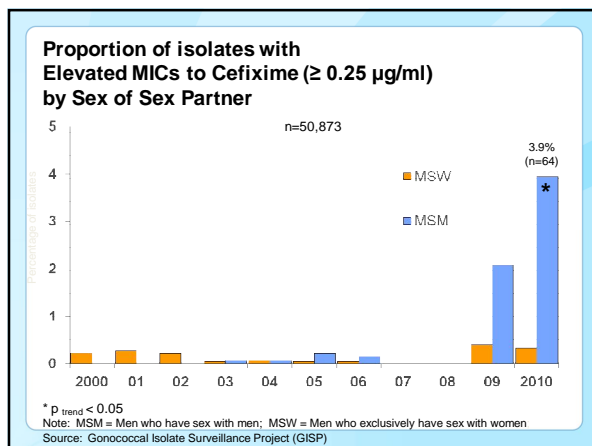
Justine

- 22 year old women who tests positive by NAAT for gonorrhea, but is negative by NAAT for Chlamydia. How to you treat?
 1. Ceftriaxone 125 mg x 1
 2. Ceftriaxone 250 mg x 1
 3. Ceftriaxone 250 mg x 1 plus Azithomycin 1 gr x 1
 4. Cefixime 400 mg x 1 plus Doxycycline 100 mg bid x 7 days

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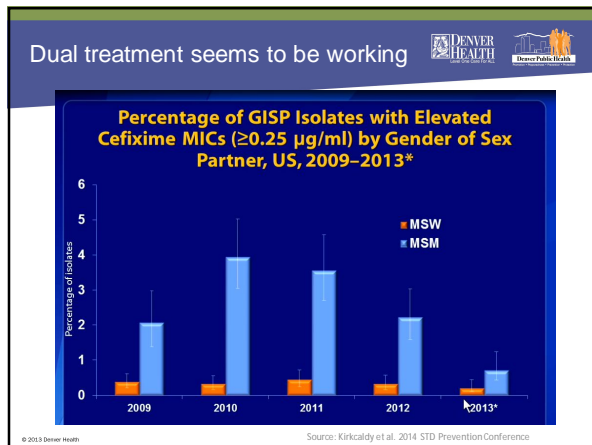
2010 Gonorrhea Treatment
Uncomplicated Genital/Rectal Infections:

Ceftriaxone 250mg IM + **Azithromycin 1g po once**
OR
Doxycycline 100mg po bid x 7 days

IM much preferred if possible

- ✓ Can treat with Cefixime 400mg + Azithromycin or doxycycline if ceftriaxone not available
- ✓ Azithromycin 2 gm po once (if allergy to cephalosporin)
- ✓ Need to do test of cure if alternative regimen used (preferably with culture)

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Gonorrhea Treatment
Uncomplicated Genital, Rectal, or Pharyngeal Infections

Ceftriaxone 250 mg IM in a single dose **PLUS*** **Azithromycin 1 g orally (preferred) or Doxycycline 100 mg BID x 7 days***

* Regardless of CT test result

Proposed: Doxycycline may be removed from recommended to alternative

CDC 2010 STD Treatment Guidelines
www.cdc.gov/std/treatment

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Gonorrhea




- Dual treatment with Ceftriaxone and Azithromycin

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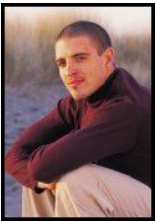
Javier

19 year old male



- Presents asking for an HIV test

What to do next?



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Javier

19 year old male

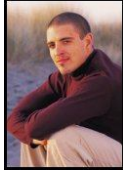
Partners: Lifetime 5 male partners


Prevention of pregnancy:

Protection from STIs: uses condoms but not 100%

Practices: Usually insertive anal (top) and oral



Past history of STI's: Gonorrhea 2 years ago. No testing since.





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STD Screening in MSM: CDC STD Treatment Guidelines



- **HIV:** HIV serology, if negative or not tested in past year
- **Syphilis:** Syphilis serology
- **Gonorrhea and Chlamydia:**
 - Urethral GC/CT if insertive intercourse in past year (urine NAAT preferred)*
 - Rectal GC/CT if receptive intercourse in past year (NAAT on rectal swab preferred)*
 - Pharyngeal GC if receptive oral sex in past year (NAAT on pharyngeal swab preferred)
- **Hepatitis B:** HBsAg to detect current infection
- **Hepatitis C:** HCV testing if HIV+ or IDU

consider HSV-2 type-specific serologic testing and anal Pap for HPV
*regardless of reported condom use


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STD Screen Frequency for MSM: CDC STD Treatment Guidelines



- At least annually for all sexually active MSM
- More frequent STD screening (i.e., at 3-6 month) for MSM
 - Who have multiple or anonymous partners
 - Who have sex in conjunction with illicit drug use (particularly methamphetamine use)
 - Whose sex partners participate in these activities



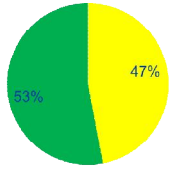
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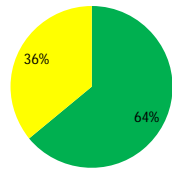
Many cases of GC and CT not identified if screening MSM only at urine/urethral sites

Chlamydia



Gonorrhea



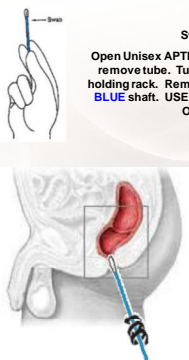
■ Identified ■ Not identified

Kent, CK et al. Clin Infect Dis July 2005

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Rectal Swab Collection Instructions



Step 1
Open Unisex APTIMA Collection kit and remove tube. Tube may be placed in holding rack. Remove the swab with the **BLUE** shaft. **USE BLUE SHAFT SWAB ONLY**

Step 2
Using the **BLUE** shaft swab, insert swab 1 inch into the anus and gently turn, making contact with rectal wall, for 5-10 seconds.


Step 3
Remove the cap from the test tube. Place the swab in the test tube. Do not puncture the foil cap.
Break swab shaft at the score mark.

Step 4
Put cap back tightly on test tube to prevent any leaking. Try not to splash liquid out of the tube.

Step 5
Discard wrapper and wash your hands.

Adapted from San Francisco City Clinic http://www.sfcityclinic.org/providers/RectalSwab_ENG.pdf

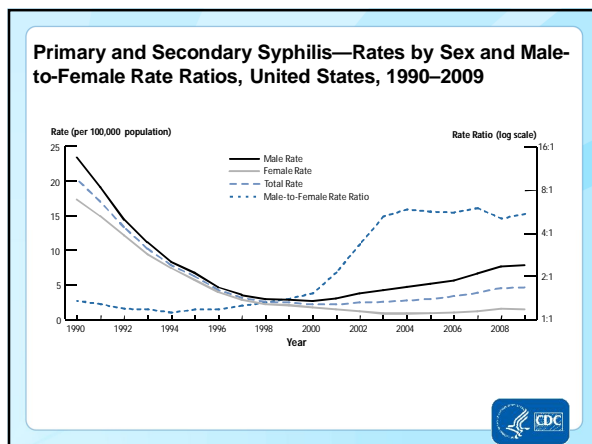
Self-Collection of Rectal Swabs for STD Screening

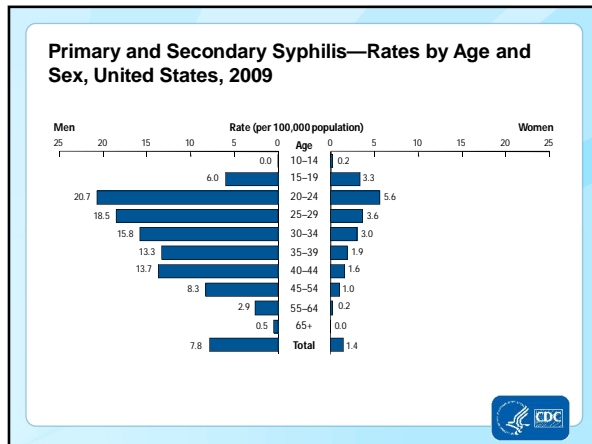


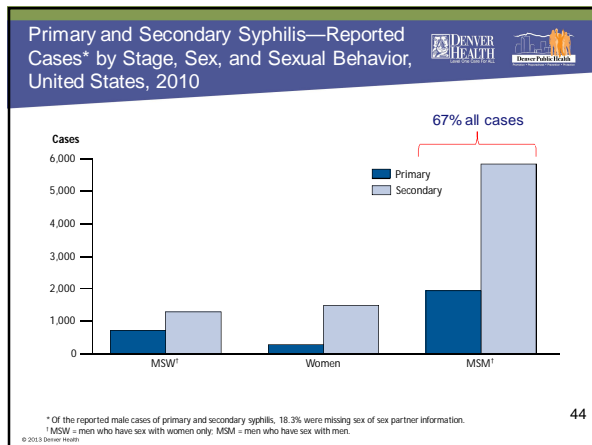
- Among ~900 MSM asked to self-collect samples for performance of BD ProbeTec (SDA) assays and APTIMA COMBO-2 (AC2)
 - Prevalence of CT = 7.3%
 - Prevalence of GC = 9.4%
- Sensitivities comparable to clinician-collected swabs
 - CT: 41% vs. 44% by SDA; 71% vs. 82% by AC2
 - GC: 77% vs. 68% by SDA; 84% vs. 78% by AC2
- Both assays far superior to culture for both organisms
- Acceptable to most MSM studied (82%)

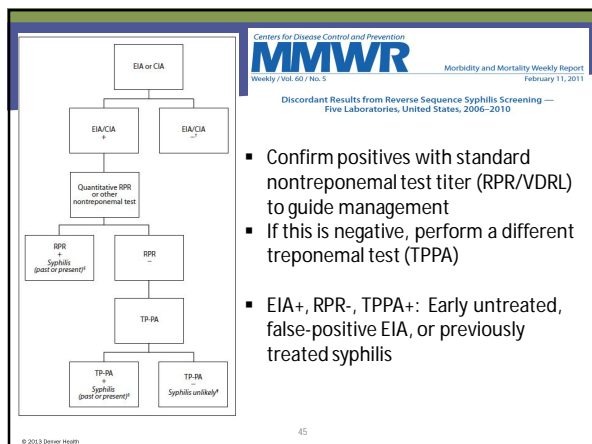
Moncada *Sex Transm Infect* 2009; Wayal *Sex Transm Infect* 2009;

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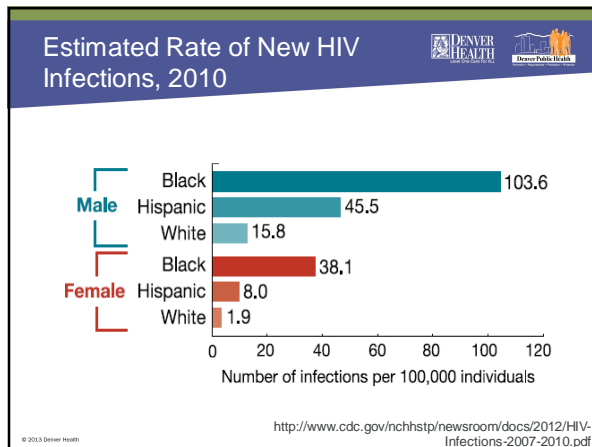
Syphilis Treatment

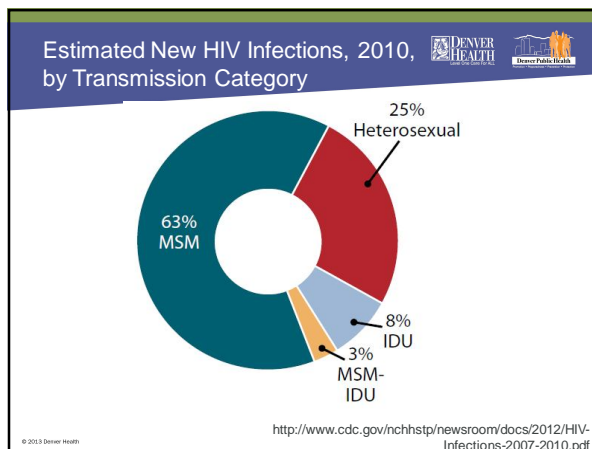
- Penicillin preferred for all stages
- Early syphilis (primary, secondary, early latent)
 - BZN PCN (L-A) single dose IM 2.4 million units
 - Do not use other injectable PCN formulations
 - Do not use azithromycin (resistance; treatment failure)
- Late latent
 - BZN PCN (L-A) IM 2.4 million units weekly x 3 doses (7.2 million u total)
- Alternatives: doxycycline, ceftriaxone

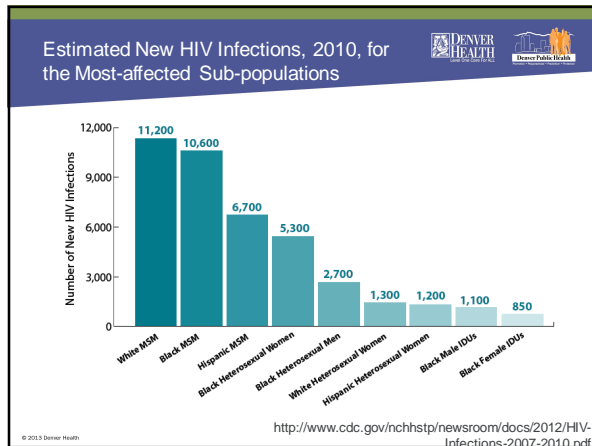


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CDC 2010 STD Treatment Guidelines www.cdc.gov/std







Prevalence of HIV in at-risk populations in Metro Denver

Risk group	HIV Prevalence	Year
Men who have sex with men	16.7%	2011
Injection Drug Users	6%	2012
Heterosexuals (Income ≤ \$20,000; Education ≤ HS)	1.2%	2013

Al-Tayyib, National HIV Behavioral Surveillance, Denver Public Health

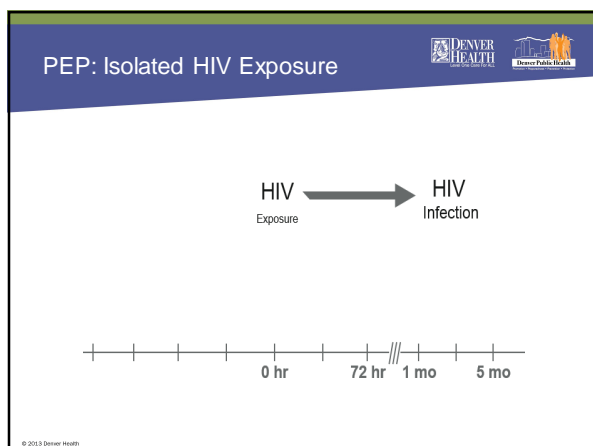
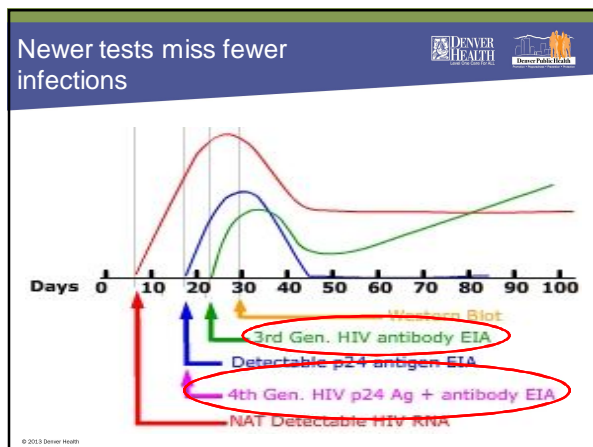
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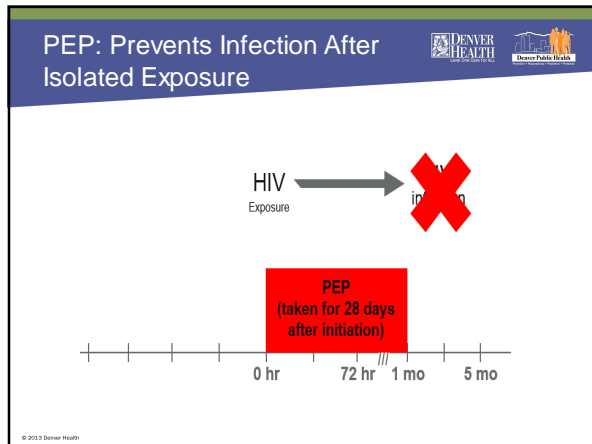
- ### What percent of the time is HIV transmitted during sex?
- Insertive anal intercourse
1. 90% (9 out of 10 times)
 2. 50% (5 out of 10 times)
 3. 5% (1 out of 20 times)
 4. 1% (1 out of 100 times)
 5. 0.1% (1 out of 1000 times)
- © 2013 Denver Health

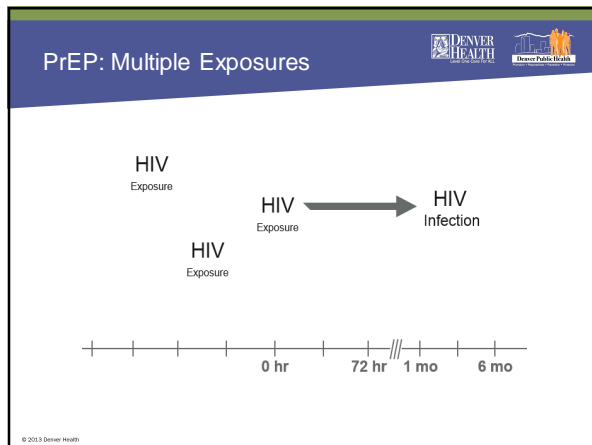
Estimated per act risk for acquisition of HIV-1 by exposure route	
Exposure Route	Infections per 10,000 exposures to HIV
Blood Transfusion	9,250 (93%)
Childbirth	2,255 (23%)
Needle-sharing IDU	63 (0.63%)
Percutaneous Needle Stick	23 (0.2%)
Sexual risk	
Receptive Anal Intercourse *	138 (1.4%)
Insertive Anal Intercourse *	11 (0.11%)
Receptive Vaginal Intercourse *	8 (0.08%)
Insertive Vaginal Intercourse *	4 (0.04%)
Receptive fellatio *	Low
Insertive fellatio *	Low

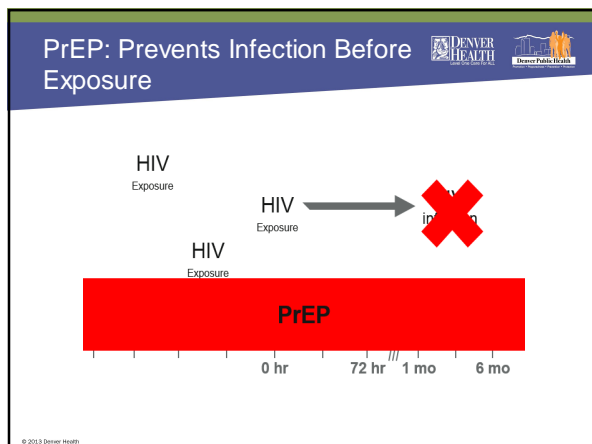
* Assuming no condom use



AIDS 2014







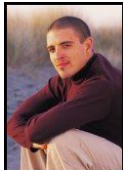



Javier

Screen for:



- HIV
- Syphilis
- Gonorrhea in all appropriate anatomic sites
- Chlamydia in all appropriate anatomic sites



- Discuss the potential need for PrEP
- Consider screening for Hep C





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Men who have sex with men

- Must ask about sexual behaviors/sexual orientation
- Screen liberally for HIV and syphilis
- Screen all appropriate anatomic sites for gonorrhea and chlamydia
- Think about PrEP


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[illegible]

Summary

- Consider GC and CT in all at-risk
- Screen appropriate anatomic sites
- Persistent NGU: Consider mycoplasma or trich
- Dual treatment for gonorrhea, regardless of CT
- Syphilis is up: Ask about sexual orientation and screen if MSM
- HIV screening: Everyone once; those at risk such as MSM annually

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